

LIST OF DISEASES*

The following diseases are notifiable as determined by the Tennessee Department of Health. (Some of the diseases are no longer notifiable but were required for reporting at some time during the period 1990 through 1997.) These diseases are not discussed in the narrative of the report.

Anthrax: Illness is caused by the bacteria *Bacillus anthracis*. Symptoms begin suddenly and may include lesions of the skin, difficulty breathing, mild symptoms resembling an upper respiratory infection, abdominal pain, and fever. If infection remains untreated, it may spread to the lymph nodes and to the bloodstream. Untreated anthrax of the skin has a case-fatality rate between 5% and 20%. Anthrax may be effectively treated with antibiotics if diagnosed in time.

Botulism (foodborne): Illness results from eating food contaminated with the toxin *Clostridium botulinum*. The first symptoms are often blurred or double vision, difficulty swallowing, and dry mouth. Vomiting, constipation, or diarrhea may also be present. As the disease progresses, an infected person becomes weaker and may experience paralysis. There is usually no fever present. The fatality rate is 5% - 10%. Recovery may take months. The toxin is produced in food that is improperly processed or canned, especially foods which have low acidity. It can also occur in pasteurized or lightly cured foods that have not been refrigerated properly. There have been cases associated with baked potatoes, improperly handled commercial potpies, sautéed onions, and minced garlic in oil. The toxin is killed by boiling.

Brucellosis: This is a bacterial disease that begins with symptoms of fever, night sweats, extreme fatigue, loss of appetite, loss of weight, headache, joint pain, and generalized aching. Infections of the liver and spleen may develop. The disease, if untreated, may last for months. The *Brucella* bacteria are found in cattle, pigs, goats, and sheep. The disease is transmitted to humans through contact with tissues or fluids from infected animals, drinking unpasteurized milk from infected animals, or eating unpasteurized cheese from infected animals.

Cholera: Cholera is caused by infection with bacteria that may produce symptoms that vary in severity. Some infected persons may have no symptoms at all. Other persons may have profuse, watery diarrhea that leads rapidly to dehydration. Untreated, the disease may have a 50% death rate. Death may occur as quickly as within a few hours in severe cases. When treated appropriately, the disease has a death rate of less than 1%. The disease is transmitted by consuming food or water contaminated with the feces or vomit of an infected person. Eating raw or undercooked seafood may also cause the disease.

*All information presented in the List of Diseases (with the exception of hantavirus) is taken directly from two sources:

1. Benenson, Abram. Control of Communicable Diseases Manual. Washington D.C.: American Public Health Association, 1995.
2. Centers for Disease Control and Prevention. "Case Definitions for Public Health Surveillance." Morbidity and Mortality Weekly Report. October 19, 1990/Vol.39/No.RR-13.

Information pertaining to hantavirus was obtained from:

"All About Hantavirus." National Center for Infectious Diseases. Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/ncidod/diseases/hanta/hps/noframes/transmit.htm>. Accessed on March 16, 1999.

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Cryptosporidiosis: This disease is caused by a parasite that infects the respiratory and gastrointestinal tract. Persons may be infected and have no symptoms but may still transmit the disease to others. The most common symptom is watery diarrhea. Other symptoms include loss of appetite, nausea, vomiting, and fever. Symptoms may come and go but generally end within 30 days. However, persons who are immunosuppressed, such as AIDS patients, may be unable to fight the parasite, and infection may result in death in these persons. The parasite may be spread by the fecal-oral method person-to-person, animal-to-person, through water, and through food. Nationwide, outbreaks have been traced to daycare centers, public water supplies, contaminated swimming pools, and unpasteurized apple juice contaminated with cow manure.

Diphtheria: Diphtheria is a vaccine-preventable disease caused by the bacteria *Corynebacterium diphtheriae*. The disease affects the upper respiratory tract and causes sore throat, low-grade fever, and nasal discharge. The most unique symptom of this disease is a grayish membrane which may form over the tonsils, pharynx, and/or nose. The disease is transmitted person-to-person through contact with discharges from an infected person or by contact with objects soiled with discharges from an infected person. Raw milk has also been known to cause diphtheria. The most effective prevention method for this disease is the timely immunization of children.

Encephalitis: Encephalitis is an inflammation of the brain. Although there are a number of causes for encephalitis, the cases that are notifiable are those that result from exposure to the bite of infected mosquitoes. Symptoms usually begin suddenly and include headache, high fever, disorientation, and may lead to coma and paralysis. Prevention methods include the elimination of mosquito breeding areas such as stagnant water and old tires, avoidance of mosquitoes during the hours when they are most likely to be present and to bite, and use of repellants.

Ehrlichiosis: Ehrlichiosis is an acute illness transmitted by tick-bites. Symptoms range from mild to severe and even fatal. The most common symptoms are fever, headache, loss of appetite, nausea, vomiting, and muscle aches. Symptoms may be similar to those of Rocky Mountain Spotted Fever with the exception that ehrlichiosis causes a rash in only 40% of cases.

Hantavirus: Hantaviruses infect mice and rats. In 1993, a new hantavirus was discovered in the southwest area of the U.S. The illness caused by this hantavirus was named Hantavirus adult respiratory distress syndrome. Symptoms include fatigue, fever, muscle aches (especially of the thighs, hips, back, and shoulders), headache, dizziness, chills, nausea, vomiting, diarrhea, and abdominal pain. This hantavirus has also been identified in Louisiana, Florida, and New York and is thought to be carried by the deer mouse, cotton and rice rats, and the white-footed mouse. It is transmitted by the urine, droppings, and saliva of these rodents. It is thought to be transmitted when tiny droplets of these substances become aerosolized and are inhaled by humans, by the bite of an infected rodent, through contamination of food with these substances, or when a person touches one of these substances and then touches his mouth or nose.

Legionellosis: Legionellosis, a bacterial disease, begins suddenly and causes high fever, loss of appetite, a feeling of tiredness, headache, cough, stomach pain, diarrhea, and pneumonia. The death rate for the disease may rise as high as 39%.

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The disease affects primarily people who are 50 years of age or older and is rare in persons under 20 years of age. The bacteria thrive in water sources such as air conditioning cooling towers, humidifiers, whirlpool spas, and decorative fountains. The bacteria has also been found in home water taps and showers, hot tubs, and in creeks and ponds.

Leprosy (Hansen disease): Leprosy is a chronic bacterial disease of the skin. The disease may cause mutilating lesions of the skin. It may affect the nerves so that an infected person may lose the feeling in the extremities. Because medications are now available to eliminate the infectiousness of persons with this disease, they no longer must be confined and isolated from others. Deformities caused by the disease may be corrected or treated surgically. The exact means by which this disease is spread is not known but is thought to occur through contact with nasal secretions or lesions.

Leptospirosis: This bacterial disease occurs after the skin or mucous membranes are exposed to the urine of infected animals, after ingestion of food contaminated with the urine of infected rats, or rarely, after inhalation of aerosolized droplets of contaminated fluids. Symptoms usually come on suddenly and may include influenza-like symptoms, fever, chills, headache, muscle aches, and tiredness. Although some infections may be so mild that they are not diagnosed, the disease may cause liver or kidney failure, heart and lung involvement, and meningitis. The death rate due to this disease may be as high as 20% especially in older people or persons with liver or kidney damage who receive inadequate care. Leptospirosis is an occupational hazard for farmers, sewer workers, veterinarians, dairymen, and fish workers. It may be a recreational hazard to swimmers, campers, and fishermen in areas where water may be contaminated by the urine of contaminated and domestic animals.

Listeriosis: Listeriosis is a bacterial (*Listeria monocytogenes*) disease that can cause inflammation of the brain and systemic infections. Symptoms may include fever, intense headache, nausea, vomiting, and coma. The bacteria may cause lesions of the heart, liver, and other organs. Pregnant women who become infected may pass the disease to their infants or may suffer an abortion. Outbreaks have been associated with ingestion of raw or contaminated milk, soft cheese, contaminated vegetables, and ready-to-eat meats.

Plague: Plague is a bacterial disease of animals, especially rodents, that occurs in humans when the fleas of the infected rodents bite a human. Rats, ground squirrels, rabbits, and hares may harbor the disease. Domestic cats may also carry plague-infected fleas into homes. Exposure may also occur after handling tissues of infected animals. Rarely, airborne droplets of infected humans or infected cats may spread the disease. Wild rodent plague exists mainly in the western half of the United States. Symptoms include fever, chills, muscle aches, nausea, sore throat, and headache. There may be a lesion at the site of the flea bite and the lymph nodes in the area close to the bite may be enlarged (bubonic plague). Bubonic plague may have a death rate of 50% to 60% if not treated. If untreated, the disease may spread to the bloodstream and affect all areas of the body. Involvement of the lungs may cause pneumonia. Persons with plague pneumonia may transmit the disease to other persons through respiratory droplets.

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Poliomyelitis: Poliomyelitis is a viral infection that causes no symptoms in approximately 90% of cases. The poliovirus may cause mild symptoms including fever, headache, nausea, and vomiting. One percent of infected persons may develop viral meningitis and one percent may develop paralysis. The disease is spread person-to-person primarily by the fecal-oral route. The use of polio vaccine as part of the childhood immunization series is the best prevention method for this disease.

Psittacosis: Caused by *Chlamydia psittaci*, psittacosis symptoms include fever, cough, chest pain, chills, headache, rash, and pneumonia. Infected birds, including parakeets, parrots, love birds, poultry, pigeons, canaries, and sea birds, are the principal source of infection for humans. Humans inhale *Chlamydia psittaci* from the droppings and dust from feathers of infected birds. This disease is of particular concern for workers at poultry plants, poultry farms, pet stores, and for owners of the above named pet birds. Even birds that may appear healthy may be infected carriers capable of transmitting the disease to humans.

Rabies: Infection with the rabies virus is almost always fatal. Symptoms include a sense of apprehension, headache, fever, and tiredness progressing to paralysis and convulsions. Death is often due to paralysis of the respiratory muscles. Transmission generally occurs when the saliva of an infected animal is introduced into a human by a bite or scratch. Airborne spread has been documented in caves where large numbers of bats were roosting. Also, cases of rabies transmission by transplantation of corneas from patients with undiagnosed rabies have occurred. Many wild and domestic animals can harbor this virus and transmit it to man including dogs, cats, foxes, coyotes, wolves, jackals, skunks, raccoons, and bats.

Reye syndrome: Reye's syndrome is a disorder of the brain seen generally in young children following an illness where the child developed a fever, usually influenza or chickenpox. Symptoms may include vomiting, agitation, and coma. Death may result from swelling of the brain.

Toxic Shock syndrome: Symptoms of this illness include high fever, vomiting, profuse watery diarrhea, muscle pain, and low blood pressure. A rash may be present and the skin, especially of the palms and soles, may peel about one or two weeks after the symptoms begin. Most cases are caused by *Staphylococcus aureus* or Group A beta-hemolytic streptococci. Although most of the early cases of this disease were associated with women and tampon use, the disease occurs in men as well and only 55% of reported disease are now associated with menses. In one third of cases no cause for the disease can be determined.

Trichinosis: Humans experience this disease after eating raw or inappropriately cooked meat, especially pork. Other animal flesh which can transmit trichinosis include dogs, cats, rats, horses, fox, wolf, bear, and wild boar. The roundworm that lives in the flesh of these animals develops in the small intestine of the person consuming the meat. Females produce young roundworms that enter the bloodstream and spread throughout the body. The young worms tend to settle in muscles. Symptoms include muscle soreness and pain, swelling of the eyelids, light sensitivity, thirst, sweating, chills, weakness, diarrhea, and fever. If undiagnosed and untreated, trichinosis may cause death due to heart failure.

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Tularemia: Tularemia is a bacterial disease that may occur after contact with an infected animal or through the bite of a tick which has previously bitten an infected animal. Animals that may be infected with tularemia include rabbits, hares, muskrats, squirrels, deer, sheep, cattle, and cats. Transmission may occur following a bite, direct contact with an infected animal, eating inadequately cooked meat of an infected animal, drinking water contaminated by an infected animal, or inhaling contaminated particles. Symptoms may vary according to the means of transmission and may include a lesion at the site of exposure, enlarged lymph nodes, severe eye inflammation, painful sore throat, stomach pain, diarrhea, vomiting, and pneumonia.

Typhus fever: Caused by *Rickettsia prowazekii*, typhus fever is transmitted by the body louse *Pediculus humanus corporis*. Symptoms include headache, chills, fever, generalized pain, and rash spreading from the trunk to the entire body except the face, palms, and soles. If not treated, the death rate from typhus fever may range from 10% to 40%, increasing with age.

Yellow fever: Yellow fever is a viral disease spread by the bite of an infected mosquito. Symptoms may include fever, chills, headache, backache, generalized muscle pain, nausea, vomiting, jaundice, slow pulse, and decreased urinary output. After a brief remission of hours to a day, in some persons the disease progresses to bleeding, liver failure, and renal failure. Twenty to fifty percent of cases involving jaundice are fatal. A vaccine is available for travelers to countries where this disease is a problem.